



PATENT ABSTRACTS OF JAPAN

(11) Publication number: **57026905 A**(43) Date of publication of application: **13.02.82**(51) Int. Cl **H03D 3/16**(21) Application number: **55102767**(71) Applicant: **MURATA MFG CO LTD**(22) Date of filing: **25.07.80**(72) Inventor: **SEIKE KIMIO**(54) **FM DEMODULATION CIRCUIT**

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(57) Abstract:

PURPOSE: To achieve adjustment-free phase shifter, by using a two-terminal type piezoelectric resonator as a tank circuit for the phase shifter and combining an impedance fixed coil and a damping resistor for the piezoelectric resonator.

CONSTITUTION: A two-terminal type ceramic resonator 12 is connected in series with a coil L_0 between an output terminal 13 of a phase shifter 11 and a common potential terminal 15 and a damping resistor R_0 is connected in parallel with the two-terminal type ceramic resonator 12. A phase leading capacitor C_0 is connected between an input terminal 14 of the phase shifter 11 and the output terminal 13. With the capacitor C_0 , the phase of a signal inputted from a limiter amplifier 1 to the phase shifter 11 is shifted by 90° , the antiresonance impedance of the resonator is damped with a damping resistor R_0 , the series resonance frequency of the resonator 12 is expanded toward lower band with the coil L_0 , and required FM demodulation characteristics can be obtained.

